Faculty of Medicine

Ain Shams University

Postgraduate Studies

Medical Doctorate in Anatomy and Embryology

Program Code: AE700

Program Guide and Logbook

C a n d i d a t e C u r r i c u l u m v i t a e

[Name]

Please attach your recent photo

[telephone no]

[mobile no]

[mailing address]

[email address]

[postcode]

Experience

[organization]

[your present job title]

[start date]

[location]

[responsibilities]

[organization]

[previous job title]

[start and end date]

[location]

[responsibilities]

[organization]

[previous job title]

[start and end date]

[location]

[responsibilities]

Education

[certificates]

[start and end date]

[school or college]

Training

[any other training that will be useful in your job]

Filled by post graduate authorities

Date of Registration

First semester _____

Second semester _____

Third semester _____

Fourth semester _____

Fifth semester (Doctorate degree) _____

Sixth semester (Doctorate degree) _____

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I – Welcome Statement:

The Department of Anatomy welcomes you to the Master degree in Anatomy and Embryology. As a department we are committed to medical student education and continuously strive to improve your educational experience.
This handbook presents information guide and logbook activity of the Master degree in Anatomy and Embryology administered by the Anatomy department, Faculty of Medicine, Ain Shams University.

II - Mission Statement:

The mission of the Faculty of Medicine, Ain Shams University is "***The preparation of a competent graduate, who is able to compete on both national and regional levels, capable of lifelong learning, training and tutoring, while adhering to the codes of practice of medical health services and ethics. The college as well, seeks continuous development of programs and courses. It also enhances expansion of applied scientific research and health programs for community services and environmental development. Moreover, through providing distinguished academic and research cadres of teaching staff, supporting the administrative system and sustainability of own resources, the college is able to achieve goals and objectives".***

The mission of this degree is to prepare a well informed anatomist capable of transmitting his knowledge to under and postgraduate students in various specialities in medicine. He should be able to transfere his skills through using modern information technology methods. Furthermore, he should be able to conduct a well constructed and targeted scientific research.

III – Senior Supervisor and Affilated Departments and Hospitals

Senior Supervisor

Prof.

E-mail:

Affilated Departments and Hospitals

IV – Program Specifications

A- Basic Information

1. Program title: Medical Doctorate of Anatomy and Embryology

2. Program type: **Single** ■ **Double** ☐ **Multiple** ☐

3. Faculty*:* Faculty of Medicine, Ain Shams University

4. Department: Department of Anatomy

5. Assistant co-ordinator

……

6. Co-ordinator

……

7. Last date of program approval:

B- Professional Information:

1. Program aims:

This program is designed to help the postgraduate medical student to master anatomical knowledge and transfer it to under and postgraduate students in various specitialities in medicine.

The program aims at preparing a well trained researcher capable of conducting targeted scientific researches.

2. Intended learning outcomes (ILOs):

a. Knowledge and understanding:

By the end of the program the candidate will be able to:

a_1 **Describe** the structural components of the different systems of the human body.

a_2 **Correlate** the structures in each of these systems with their functions.

a_3 **Define** surface markings and **identify** the anatomical features.

a_4 **Recognize** common anatomical variations and **understand** the causes.

a_5 **Recognise** the stages of general human development and **define** the congenital anomalies and understand their causes.

a 6 **Correlate** the structure of the nervous system with its function and identify the effect of lesions in its various components.

a 7 **Identify** the various structures in plain X-ray, CT scans and MRI.

b. Intellectual capabilities:

By the end of the program the candidate will be able to:

b1 **Recognize** the anatomical underpinnings of clinical problems.

b2 **Discuss** the causes of the anatomically related clinical problems and the suggested ways of management.

b3 **Analyze** in case-based discussions the information from clinical problems framed in a clinical presentation format, to emphasize the gross anatomy, neuroanatomy and embryology of the human body.

c. Professional and practical skills:

By the end of the program the candidate will be able to:

c1 **Communicate,** verbally and in writing, relevant anatomical information simply and concisely, with use of visual aids whenever appropriate.

c2 **Identify** the anatomical specimens (bones, muscles, vessels, nerves, organs, glands, viscera, etc.) in a precise and accurate manner.

c 4 **Identify** anomalies in embryology specimens.

c 5 **Interpret** common diagnostic images (CTs, MRI and x-ray, etc.) to identify anatomical landmarks and structures.

d. General and transferable skills:

By the end of the program the candidate will be able to:

d1 Recognize and use anatomic knowledge to conduct a well targeted scientific reaserch.

d 2 Use of modern information technology methods to transfer or acquire the anatomical knowledge.

d3 Deal with and treat the anatomical specimens (dead bodies, anatomical parts and bones) with respect.

d4 Communicate effectively verbally with colleagues and teaching staff.

3. Academic standards: (Benchmarks)

According to Boston University, Faculty of Medicine.USA

4. Curriculum structure and contents:

4a- Program duration: 3 years (6 semesters)

5. Program courses:

5.1) درجة الدكتوراه في التشريح و الأجنة AE700

Medical Doctorate in Anatomy and Embryology (AE700)

المناهج			
المقررات الدراسية		الكود	الساعات المعتمدة
متطلبات الكلية	دورة أساسيات البحث العلمي		
الجزء الأول	لا يوجد		
الرسالة			١٥
الجزء الثاني	التشريح العام	AE7001	١٤
	تشريح الجهاز العصبي	AE7002	٥
	علم الأجنة	AE7003	٥
	الأشعة التشريحية	AE7004	٢
المقررات الاختيارية	يتم اختيار مادة واحدة من: ١- تشريح عصبي متقدم ٢- علم أجنة متقدم	 E7001 E7002	٤
كراسة الأنشطة			١٥
المجموع			٦٠

6. Program admission requirements:

١- أن يكون حاصلاً على درجة الماجستير في مادة التخصص أو إحدى المواد الأساسية المتصلة بها من إحدى الجامعات المصرية أو على درجة معادلة لها .٢- موافقة جهة العمل على متطلبات الدراسة. ٩- تسديد الرسوم ومصاريف التدريب وإستهلاك الأجهزة وإستيفاء المستندات المطلوبة في الملحق (٢) ١٠ ٠- التفرغ للدراسة لمدة خمس فصول دراسية على الأقل قبل دخول امتحان الجزء الثاني. ويمكن أن يتم التدريب لنفس المدة على الأقل فى احد المستشفيات أو المراكز العلمية المعتمدة من الكلية بعد أستيفاء الشروط التى تحددها الأقسام المختصة.

7. Regulation for progression and program completion.

مادة (٨): يتم التسجيل لدرجات الدكتوراه مرتين فى العام : الأولى من أول يوليو حتى آخر أغسطس والثانية من أول نوفمبر حتى آخر ديسمبر ٠

مادة (٩): توزع الدراسة فى كل عام جامعى على فصلين دراسيين مدة كل منهما خمسة عشر اسبوعاً . يبدا الاول فى أول أكتوبر ويبدا الثانى فى منصف فبراير. مع تنظيم فصل دراسى صيفى مكثف لمدة ستة اسابيع . و يتم التسجيل للفصل الدراسى قبل اسبوعين من بدايته على الاقل بعد إستيفاء الشروط حسب المقررات المسجلة. ولاينبغى أن يزيد العبء الدراسى فى الفصل الواحد عن ٦ ساعات معتمدة. ويجوز للطالب تعديل المقررات خلال اسبوعين من بداية الفصل الدراسى (بالحذف او الاضافة). كما يجوز له الانسحاب خلال سته اسابيع من احد المقرارت دون احتسابه راسباً فيه.

مادة (١٧): مدة الدراسة للحصول على الدكتوراه ستة وثلاثون شهراً (ست فصول دراسية) يجتاز خلالهم الطالب برنامجاً تدريبياً متكاملاً بالقسم طبقاً للساعات المعتمدة الموضحة بالباب الخامس ويستوفى خلالها المطلوب منه فى كتيب متابعة الأنشطة ولا يسمح له بدخول الإمتحان قبل إستيفاء ثلاثة أرباع المطلوب منه من الساعات المعتمدة.

مادة (١٨): مدة الدراسة في الجزء الأول للدكتوراه إن وجد فصل دراسي واحد يجتاز بعده الطالب إمتحاناً ولا يشترط النجاح فيه بالكامل للإنتقال للدراسة في الجزء الثاني ويشترط خلالها التدريب بإحدى المستشفيات الجامعية أو المراكز المعتمدة من القسم ولجنة الدراسات العليا بالكلية سواء بالداخل أو الخارج على أن يتم إستكمال الدراسة طبقاً للساعات المعتمدة.

مادة (١٩): يقوم الدارس لدرجة الدكتوراه بتسجيل موضوع الرسالة مع القيد للدرجة ولا تجوز مناقشة الرسالة قبل مرور عامين على التسجيل للدرجة ولا يخصص لها درجات.

مادة (٢٠): يقوم الدارس لدرجة الدكتوراه بإستيفاء متطلبات الجامعة قبل التسجيل ومتطلبات الكلية ومناقشة الرسالة قبل دخول إمتحان الجزء الثاني. ومتطلبات الجامعة هي الحصول على شهادة التويفل في اللغة الإنجليزية (مجموع ٥٥٠ درجة) ومتطلبات الكلية هى حضور دورات معتمدة من لجنة الدراسات العليا بالكلية فى مجال التخطيط والدراسات الطبية والإحصاء الطبي أو إجتياز إختبارات خاصة تحددها اللجنة.

مادة (٢١): الساعات المعتمدة لدراسة الدكتوراه ست و تسعون ساعة منها ست و ثلاثون ساعة تمت دراستهم اثناء الماجستير و يضاف ستون ساعة معتمدة على الأقل ويخصص منها خمس عشرة ساعة لكتيب متابعة الأنشطة وخمس عشرة ساعة للرسالة وست ساعات على الأقل للجزء الأول إن وجد.

مادة (٢٢): مدة القيد لدرجة الدكتوراه خمس سنوات ويجوز لمجلس الجامعة بناءاً على طلب مجلس الكلية وبعد موافقة لجنة الدراسات العليا بالكلية بعد طلب مجلس القسم وإستناداً إلى تقارير سنوية من جميع المشرفين على الطالب السماح بإضافة عام واحد وبحد أقصى ثمان سنوات من تاريخ القيد للحصول على درجة الدكتوراه.

مادة (٢٣): تلتزم الاقسام المعنية بالأشتراك مع أقسام المواد المرتبطة بوضع إمتحانات موضوعية تشمل وسائل التقييم المختلفة من أسئلة طويلة وقصيرة ومتعددة الإختيارات ، وإختبارات إكلينيكية مقننة تقيس المهارات المختلفة على أن تشمل كراسة المناهج تفاصيل ذلك وتعتمد من لجنة الدراسات العليا بالكلية .

مادة (٢٤): مجموع درجات الامتحان النهائى للدكتوراه ١٥٠٠ درجة منها ٣٠٠ درجة للجزء الأول إن وجد. ويضاف اليها المعدل الفصلى التراكمى بما يوازى ٤٠٠ .

مادة (٢٥): يعقد إمتحان الدور الأول في أكتوبر ونوفمبر من كل عام ويعقد إمتحان الدور الثاني فى أبريل ومايو من كل عام.

مادة (٢٦): يكون النجاح فى مواد الدكتوراه بعد الحصول على ٦٠% من درجة التحريري والعملي والاكلينيكى والشفوي كل على حدة.

Assessment Schedule and Weighing of Assessments **(Doctorate degree)**

Item			Mark			Points	GPA score	الطالب Student
			During semester	End of semester	Total			
First semester (If present)								
Second semester			80					
Third semester			80					
Fourth semester			80					
Fifth semester			80					
Sixth semester			80					
Sixth semester Final exam	Written			1500 *				
	Oral							
	Practical /Clinical							
Total			400	1500	1900			

*** 1500 if there is no first semester**

ملحوظة: تعادل درجات الطالب طبقا للنقاط على الوجه التالى:

١-	٩٠ % فأكثر	:	٤	نقاط	A
٢-	من٨٥% حتى أقل من ٩٠ %	:	٣,٦٧	نقاط	A^-
٣ -	من٨٠% حتى أقل من ٨٥%	:	٣,٣٣	نقاط	B^+
٤ -	من٧٥% حتى أقل من ٨٠%	:	٣,٠٠	نقاط	B
٥ -	من٧٠% حتى أقل من ٧٥%	:	٢,٦٧	نقاط	B^-
٦ -	من٦٥% حتى أقل من ٧٠%	:	٢,٣٣	نقاط	C^+
٧-	من٦٢% حتى أقل من ٦٥%	:	٢,٠٠	نقاط	C
٨ -	من٦٠% حتى أقل من ٦٢%	:	١,٦٧	نقاط	C^-
٩ -	أقل من ٦٠%	:	صفر		F

مجموع درجات الامتحان النهائى للدبلوم العالى والماجستير ١٢٠٠ درجة منها ٣٠٠ درجة للجزء الأول ومجموع درجات الامتحان النهائى للدكتوراه ١٥٠٠ درجة منها ٣٠٠ درجة للجزء الأول إن وجد. ويضاف إليها المعدل الفصلى التراكمى بما يوازى ٣٠٠ درجة للدبلوم العالى والماجستير و ٤٠٠ درجة للدكتوراه.

ويتم حساب المعدل الفصلى (GPA) على أساس مجموع حاصل ضرب نقاط كل مقرر مضروباً فى عدد ساعاته المعتمدة مقسوماً على الساعات المعتمدة للمقررات التى درسها الطالب فى الفصل الدراسى. كما يتم حساب المعدل التراكمى للطالب (CGPA) على أساس مجموع حاصل ضرب النقاط التى حصل عليها الطالب فى كل مقرر مضروباً فى عدد ساعاته المعتمدة مقسوماً على مجموع الساعات المعتمدة الكلية.

فى حالة الرسوب فى مادة أو مجموعة من المقررات فى الدبلوم أوالماجستير أو الدكتوراه يتم الإعادة فى المادة أو المجموعة فقط. ويتم حساب التقدير الفعلى الذى يحصل عليه فى أول إعادة فقط أما إذا تكرر رسوبة فيحسب له عند النجاح تقدير ٦٠% فقط (اى١,٦٧ نقاط اى C^-).

ycompulso

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE7001 AE7001a	Gross human anatomy: Upper, lower limbs & thorax	3	130 48	163 56	9			
AE7001b	Abdomen, pelvis, perineum	2	37	36	15			
AE7001c	Head & neck	1	47	40	4			
AE 7002	Neuroanatomy	1	52	48				
AE 7003	Embryology	2	67	16				
AE 7004	Radiological anatomy	1	10	20				

. Elective (choose ONE) year of programme 3 semester 6

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
E7001	Advanced neuroanatomy	1	44	24	4			
E 7002	Advanced embrology	1	54	15	2			

8.Course specification (for each course in the template)

8. 1 Course specifications of Gross human Anatomy 1

University Ain Shams **Faculty of Medicine**
Program(s) on which the course is given: **Medical Doctorate degree in Anatomy and Embryology**
Major or minor element of programs: major
Department offering the program: **Anatomy Department**
Department offering the course **Anatomy Department**
Academic year / Level: **Semester 1**
Date of specification approval ……..

A- Basic Information

Title: Gross human Anatomy1 **Code: AE7001a**
Credit Hours: 5 **Lecture: 48**
Tutorial: 9 **Practical: 56** **Total: 113**

Coordinator

B - Professional Information

1- Course Aims:

This course was designed so postgraduate students would acquire sufficient knowledge and skills needed to identify the various structures of the upper limb, lower limb and thorax. Emphasis is given particularly to points of clinical relevance and fields of surgical importance.

2- Intended Learning Outcomes (ILOs):
a- Knowledge and understanding
By the end of the course the candidate will be able to:
a1 - Describe the anatomy of the following **regions** upper limb, lower limb and thorax.
a2- Describe the Skeleton (axial and appendicular) and names of the various bony features and muscles attached.
a3- Identify the various Joints and ligaments of the upper limb, lower limb and thorax.

.**a4- Describe the** origin, insertion, main action(s), innervations and relations of skeletal muscles of the upper limb, lower limb and thorax.
a5-Recognize the origin, course, surface landmarks, termination and branches/tributaries of the blood vessel.
a6- Define the origin, course, distribution of the nerves and realize the effect of nerve lesion.
a7- Describe the thoracic viscera and **organs** and define their site, size, shape, parts, structure, special features if any, relations, serous covering, neurovascular supply, lymphatic drainage and surgical anatomy.

b- Intellectual skills

By the end of the course the candidate will be able to:

b1- Employ anatomical knowledge to solve clinical problems by correlating between a given trauma (wound, fracture, …etc.) or surgical procedure (e.g. intercostal nerve block) and the structure(s) liable to injury.
b2 - Interpret diagnostic images and understand the clinically relevant condition.
b3- Identify the structure present in a given surface landmark.
b4- Identify the group of lymph nodes to which cancer in a given region may spread

c- Professional skills

By the end of the course the candidate will be able to:

c1- Identify the anatomical specimens (muscles, vessels, nerves, organs) in a precise and accurate manner.
c2- Interpret common diagnostic images (CTs, MRI and x-ray).

d- General and transferable skills

By the end of the course the candidate will be able to:

d1**.** ***Communicate*** scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.
d2. ***Research***: run a library search or an internet search, collect data and present a concise review about a chosen topic.

3- Course content:

Topics	No. of hours			
	L	T	C/P	SDL
Bones of the upper limb	2		3	
Pectoral region	1		2	
Axilla	2		4	
Mammary Gland	1			1
Back	1		2	
Scapular region	1		2	
Upper arm and Cubital fossa.	2		2	
Forearm and wrist.	2		3	
Hand and Digital muscles	2		2	
Joints of the upper limb	2		2	1
Dermatomes of the upper limb and venous &lymphatic drainage	2			1

L: Lecture(18), T: Tutorial, C/P: Clinical or Practical (22)and SDL: Self directed learning (3)

Topics	No. of hours			
	L	T	C/P	SDL
Bones of the lower limb	2		3	
Front of the thigh	1		2	
The femoral triangle and femoral sheath	1		2	1
Medial side of the thigh and Adductor (subsartorial) canal	1		2	
Gluteal region	1		2	
Back of the thigh and popliteal fossa	2		2	
Leg (anterior lateral and posterior compartments)	2		3	
Dorsum of the foot	1		2	
Sole of the foot	1		2	
Joints of the lower limb	2		2	
Arches of the foot and mechanism of walking	2			1
Venous drainage of the lower limb				1
Dermatomes of the lower limb and lymphatic drainage				1

L: Lecture (18), T: Tutorial, C/P: Clinical or Practical (22) and SDL: Self directed learning (4)

Topics	No. of hours			
	L	T	C/P	SDL
Bones: sternum, ribs & thoracic vertebrae	2		3	
Thoracic wall (intercostals space)	2		2	
Pleura and Lungs	2		2	
Pericardium and Heart	2		2	
Mediastinum	2		2	
Lymphatic drainage of the thorax				1
Joints of the thorax	2			1
X-rays, CT & MRI images & cross-sectional anatomy			1	

L: Lecture (12), T: Tutorial, C/P: Clinical or Practical (12) and SDL: Self directed learning(2)

5 -- List of References

5.1- Course Notes (paper and / or electronic)

- **Thorax: (***Authors: (Kariman Elgohary, Ibtisam Bahei, Fatma Elrakhawy)*
- **Upper Limb ,Lower limb: (***Authors: (Kariman Elgohary, Ibtisam Bahei)*

5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 40th edition, Elsevier, 2008
- Tank, P.W., **Grant's Dissector**, 14th edition, Lippincott, Williams and Wilkins, 2008

5.3- Recommended Books

- Moore, K.L. and A.F. Dalley, **Clinically Oriented Anatomy**, 5th edition, Lippincott, Williams & Wilkins, 2006.

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

Useful website http://isc.temple.edu/marino/embryo/genitan.htm

8.2 Course specifications of Gross human Anatomy2

Program(s) on which the course is given:**Medical Doctorate degree in Anatomy and Embryology**
Major or minor element of programs: major
Department offering the program: **Anatomy Department**
Department offering the course **Anatomy Department**
Academic year / Level: **Semester 2.**
Date of specification approval ……..

A- Basic Information

Title: Gross human Anatomy 2 **Code: AE7001b**
Credit Hours: 4 **Lecture: 37**
Tutorial: 15 **Practical: 36** **Total: 87**

Coordinator

B - Professional Information

1- Course Aims:

This course was designed so postgraduate student would acquire sufficient knowledge and skills needed to identify the various structures of the abdomen and pelvis.Correlate structure with function. Emphasis is given particularly to points of clinical relevance and fields of surgical importance.

2- Intended Learning Outcomes (ILOs):

a- Knowledge and understanding

By the end of the course the candidate will be able to:

a1 - Describe the anatomy of the following **regions** abdomen, pelvis, perineum.
a2- Describe the various bony featuresin these regions and muscles attached.
a3- Identify the various Joints and ligaments of these regions.
a4- Describe the origin, insertion, main action(s), innervations and relations of skeletal muscles of the abdomen, pelvis, perineum.
a5-Recognize the origin, course, surface landmarks, termination and branches/tributaries of the blood vessel.
a6- Define the origin, course, distribution of the nerves and realize the effect of nerve lesion.
a7- Describe the different abdominal and pelvic viscera and **organs** and define their site, size, shape, parts, structure, special features if any, relations, fascial covering, neurovascular supply and lymphatic drainage and surgical anatomy.

b- Intellectual skills

By the end of the course the candidate will be able to:

b1- Employ anatomical knowledge to solve clinical problems by correlating between a given trauma (wound, fracture, …etc.) or surgical procedure and the structure(s) liable to injury.

b2 - Interpret diagnostic images and understand the clinically relevant condition.

b3- Identify the structure present in a given surface landmark.

b4- Identify the group of lymph nodes to which cancer in a region may spread

c- Professional skills

By the end of the course the candidate will be able to:

c1- Identify the anatomical specimens (muscles, vessels, nerves, organs, glands) in a precise and accurate manner.

c2- Interpret common diagnostic images (CTs, MRI and x-ray).

d- General and transferable skills

By the end of the course the candidate will be able to:

d1**.** ***Communicate*** scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.

d2. ***Research***: run a library search or an internet search, collect data and present a concise review about a chosen topic.

Topics	No. of hours			
	L	T	C/P	SDL
Anteroior abdominal wall	2		2	
Inguinal region	2		2	2
Male external genital organs	1		2	2
Abdominopelvic cavity and peritoneum	1		2	
Gastrointestinal tract	3		4	
spleen and pancreas	2		2	
Liver and biliary passages	2		2	
Blood supply of the gut	1		2	
Portal vein and portosystemic anastomosis	1			2
Posterior abdominal wall: muscles, vessels and nerves	3		4	
Kidneys and suprarenal gland	1		2	
Autonomic plexuses	1			2
Lymphatic drainage of abdomen	1			2

L: Lecture (21), T: Tutorial, C/P: Clinical or Practical (24)and SDL: Self directed learning (10)

Topics	No. of hours			
	L	T	C/P	SDL
Regions and spaces (definitions and limits of the false pelvis, true pelvis and perineum).	1			1
Pelvic skeleton (hip bones, sacrum and coccyx)	2		2	1
Pelvic joints and ligaments	2			
Pelvic muscles and fascia	1		2	
Pelvic vessels	1		2	
Pelvic nerves	1		2	
Pelvic lymph nodes	1			1
Pelvic peritoneum	1			
Pelvic viscera: urinary bladder, rectum, male and female reproductive organs	3		2	2
Perineum: boundaries and subdivision	1			
Ischiorectal fossa and anal canal	2		2	

L: Lecture (16), T: Tutorial, C/P: Clinical or Practical (12) and SDL: Self directed learning (5)

5.1- Course Notes (paper and / or electronic)

5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 40th edition, Elsevier, 2008
- Tank, P.W., **Grant's Dissector**, 14th edition, Lippincott, Williams and Wilkins, 2008

5.3- Recommended Books

- Moore, K.L. and A.F. Dalley, **Clinically Oriented Anatomy**, 5th edition, Lippincott, Williams & Wilkins, 2006.

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

Useful website http://isc.temple.edu/marino/embryo/genitan.htm

8.3 Course specifications of Gross human Anatomy3

Program(s) on which the course is given: **Medical Doctorate degree in Anatomy and Embryology**
Major or minor element of programs: major
Department offering the program: **Anatomy Department**
Department offering the course **Anatomy Department**
Academic year / Level: **Semester 3.**
Date of specification approval ……..

A- Basic Information

Title: Gross human Anatomy 3 **Code: AE7001c**
Credit Hours: 5 **Lecture: 55**
Tutorial: 4 **Practical: 42** **Total: 101**

Coordinator

B - Professional Information

1- Course Aims:

This course was designed so postgraduate student would acquire sufficient knowledge and skills needed to identify the various structures of the head & neck. Emphasis is given particularly to points of clinical relevance and fields of surgical importance.

2- Intended Learning Outcomes (ILOs):
a- Knowledge and understanding
By the end of the course the candidate will be able to:
a1 - Describe the anatomy of the different **regions of** head and neck.
a2- Describe the skeleton and names of the various bony features, muscles attached, foramina and structures passing through them
a3- Identify the various Joints and ligaments of this region.
a4- Describe the origin, insertion, main action(s), innervations and relations of skeletal muscles of the head and neck.
a5-Recognize the origin, course, surface landmarks, termination and branches/tributaries of the blood vessel.
a6- Define the origin, course, distribution of the nerves and realize the effect of nerve lesion.

a7- Describe the viscera of the head and neck and define their site, size, shape, parts, structure, special features if any, relations, fascial covering, neurovascular supply and lymphatic drainage,surface markings and surgical anatomy.

b- Intellectual skills

By the end of the course the candidate will be able to:

b1- Employ anatomical knowledge to solve clinical problems by correlating between a given trauma (wound, fracture, …etc.) or surgical procedure (e.g. cervical nerve block) and the structure(s) liable to injury.

b2 - Interpret diagnostic images and understand the clinically relevant condition.

b3- Identify the structure present in a given surface landmark.

b4- Identify the group of lymph nodes to which cancer in a given region may spread

c- Professional skills

By the end of the course the candidate will be able to:

c1- Identify the anatomical specimens (muscles, vessels, nerves, organs, glands) in a precise and accurate manner.

c2- Interpret common diagnostic images (CTs, MRI and x-ray).

d- General and transferable skills

By the end of the course the candidate will be able to:

d1**.** ***Communicate*** scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.

d2. ***Research***: run a library search or an internet search, collect data and present a concise review about a chosen topic.

Topics	No. of hours			
	L	T	C/P	SDL
Bones: Skull, mandible	2		4	
Scalp, face, parotid region	3		3	
Cranial cavity	3		3	
Orbit	3		2	
Temporal & infratemporal fossa + pterygopalatine fossa & TMJ	4		4	
Submandibular region	3		2	
Triangles of neck	3		2	
Thyroid gland	2		2	
Fascia of the neck	2			
Last 4 cranial nerves	3		2	2
Prevertebral region	4		2	
deep dissection of neck	3		2	
Nose & paranasal sinuses	2		2	
Mouth, tongue, palate	3		2	
Pharynx	3		2	
Larynx	3		2	
Ear & facial nerve	3		2	
cervical vertebrae + Joints of the head & neck	2		2	2
Lymphatic drainage and blood supply of the head and neck	4			
X-rays, CT & MRI images			2	

L: Lecture (55), T: Tutorial, C/P: Clinical or Practical (42) and SDL: Self directed learning (4)

4 - Student Assessment Methods for gross anatomy course(1-3)

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills.
4.4 Weighing of assessment
-written (2papers/210 each)
-oral 70
-practical 210
Total: 700 marks

5.1- Course Notes (paper and / or electronic)

- El Gohary K.. **Lecture Notes on Head & Neck**

5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 40th edition, Elsevier, 2008
- Tank, P.W., **Grant's Dissector**, 14th edition, Lippincott, Williams and Wilkins, 2008

5.3- Recommended Books

- Moore, K.L. and A.F. Dalley, **Clinically Oriented Anatomy**, 5th edition, Lippincott, Williams & Wilkins, 2006.

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/
- Useful website http://isc.temple.edu/marino/embryo/genitan.htm

8.4 Course specifications of Neuroanatomy

Program(s) on which the course is given: **Medical Doctorate** degree in **Anatomy and Embrology**

Major or minor element of programs: **Neuroanatomy.**

Department offering the program: **Department of Anatomy**

Department offering the course: **Department of Anatomy**

Academic year / Level: **Semester 4**

Date of specification approval ……..

A- Basic Information

Title: Neuroanatomy **Code: AE 7002**
Credit Hours: 5 hrs **Lecture: 52**
Tutorial: **Practical: 48** **Total: 100**

Coordinator
~~~~~~~~~~~~~~~~~~~~~~~~~~
B ~ Professional Information

1- Course Aims:
This course aim that postgraduate student would acquire sufficient knowledge and skills needed to identify the gross structure of the human central nervous system (CNS). Emphasis is given particularly to points of clinical relevance and fields of surgical importance.

2- Intended Learning Outcomes (ILOs) from the Course:
a- Knowledge and understanding
By the end of the course the candidate will be able to:
a1. Describe the gross anatomy of the CNS and its blood supply.

a2. List structures present in a certain region e.g., structures in the interpeduncular fossa, contents of a cerebellar peduncle, nuclei of cranial nerves.

a3. Identify the cranial nerve supplying a given structure.

a4. Pair/ associate any vessel with its area of distribution.

b- Intellectual skills
By the end of the course the candidate will be able to:
b1- Employ anatomical knowledge to solve clinical problems.
b2 - Localize the possible site of lesion in the nervous system from given clinical data denoting sensory or motor loss.
b3 **-** Interpret diagnostic images and understand the clinically relevant condition.

c- Professional skills
By the end of the course the candidate will be able to:
c1- Identify major structure(s) of the human brain
c2- Identify the different features of the brain stem
c3-Recognize the site of attachment of the cranial nerves to the brain
c4-Identify the different structures in TS and median sagittal section of the brain.
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d- General and transferable skills

By the end of the course the candidate will be able to:

d1. ***Communicate*** scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.

d2. ***Research***: run a library search or an internet search, collect data and present a concise review about a chosen topic.

3- Course content:

Topics	No. of hours			
	L	T	C/P	SDL
Gross morphology of the spinal cord and its blood supply & lesions	3		2	
Tracts	3		2	2
Gross morphology of the brain stem and its blood supply	3		2	
Cranial nerve nuclei	4		2	2
Fourth ventricle	1		2	
Gross morphology of the cerebellum and its blood supply	3		2	
Gross morphology of the diencephalon and its parts	3		2	
Gross morphology of the cerebral hemispheres	4		2	
Gross morphology of the limbic system	2		2	2
White matter of the cerebral hemispheres	3		2	
Gross morphology of the basal ganglia	2		2	
Brain ventricles (lateral & 3rd) & CSF	3		2	
Median sagittal section of the brain	2		2	
TS of the brain	4		4	
Meninges	2		2	
Blood supply of the brain	4		2	
Special sensory pathways (olfactory, visual auditory)	4		2	2
MRI & CT of the normal brain	2		4	

L: Lecture (52), T: Tutorial, C/P: Clinical or Practical (40) and SDL: Self directed learning (8)

4 - Student Assessment Methods

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills.
4.4 Weighing of assessment
-written (1paper/150)
-oral 25
-practical 75
Total: 250 marks

5 -- List of References

5.1- Course Notes:
- (paper and / or electronic) neuroanatomy
- Lectures notes (kariman elgohari)

5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 40th edition, Elsevier, 2008

5.3- Recommended Books

- Snell, R.S., **Clinical NeuroAnatomy**, 8th edition, Lippincott, Williams and Wilkins, 2008.
- Moore, K.L. and A.F. Dalley, **Clinically Oriented Anatomy**, 5th edition, Lippincott, Williams & Wilkins, 2006.

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

8.5 Course specifications for Embryology

Program(s) on which the course is given **Medical Doctorate degree** in **Anatomy and Embryology……**

Major or minor element of programs **Embryology…**……..

Department offering the program: Anatomy and Embryology

Department offering the course : Anatomy and Embryology

Academic year / Level: 5th semester

Date of specification approval ……..

A~ Basic Information

Title: Embryology **Code: AE 7003**
Credit Hours: 5 hours **Lecture: 67**
Tutorial: **Practical: 16** **Total: 83**

Coordinator

B ~ Professional Information

1- Course Aims:

a) The course provides an outline of the events taking place during the early four weeks of human development; this lays the foundation for understanding further development of individual organs and systems. In addition, the course covers the formation of fetal membranes and placenta with a hint about their functions and common malformations. It also gives a brief idea about the genetic and environmental causes of congenital malformations.

b) The course provides an overview on the development of the various body systems in the human, and lays the foundation for understanding the underlying mechanisms of congenital malformations.

2- Intended Learning Outcomes (ILOs) from the Course:
a-Knowledge and understanding
By the end of the general embryology course the candidate will be able to:

a $_1$Describe the sequence of events taking place during early prenatal development of the human embryo, including gametogenesis, fertilization, implantation, cleavage, gastrulation, neurulation and folding.

a $_2$List/identify the derivatives of each embryonic germ layer (e.g., derivatives of mesoderm etc.), the results of fertilization, the contents of umbilical cord, the functions of amnion or placenta.

a $_3$Pair a derivative with its undifferentiated embryonic germ layer – or a given day with the corresponding stage of the fertilized ovum.

a $_4$Compare between spermatogenesis and oogenesis, uniovular and binovular twins, 1ry, 2ry and 3ry chorionic villi, the parts of deciduas, the types of placenta previa, the 1ry, 2ry and definitive yolk sac.

a $_5$Predict the result of union between any type of sperm (with normal or abnormal number of chromosomes) with an ovum (having a normal or abnormal number of chromosomes). **Predict** the possible congenital anomaly that may arise from a certain chromosomal defect or environmental agent including drugs.

By the end of the systemic embryology course the candidate will be able to:

a $_6$Describe the sequence of events taking place during prenatal development of the various components of the body systems, including the cardiovascular, respiratory, digestive, urogenital, endocrine, musculoskeletal, nervous and integumentary systems, in addition to organs of special senses, the head and neck and coelomic cavities.

a $_7$List/identify the derivatives of an embryonic structure (e.g., derivatives of sinus venosus, ventral mesogastrium, mesonephros, pharyngeal pouches ... etc.).

a $_8$List/identify the embryonic source(s) of an organ (e.g., sources of the right atrium, the duodenum, the urinary bladder ... etc.).

a $_9$Pair a derivative of an undifferentiated embryonic structure in the male with its counterpart in the female.

a $_{10}$Predict the possible congenital anomaly that may arise if a certain fault occurs during embryonic development.

b-Intellectual skills

By the end of the course the candidate will be able to:

b $_1$Solve problems by correlating between a given congenital abnormality and the faulty incidence during development.

b $_2$Predict the prenatal age from the number of existing somites. **Predict** the state of the embryo in a given postovulation day.

c- Professional skills

By the end of the course the candidate will be able to

c $_1$ identify any common congenital anomaly of the fetal membranes, fused twins, genetic anomalies in a given diagram, photograph or museum jar.

d- General and transferable skills

By the end of the course the candidate will be able to:

d $_1$Communicate scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.

d$_2$Research: run a library search or an internet search, collect data and present a concise review about a chosen topic.

3- Course content:

I. General Embryology

L: Lecture (22), C/P: Clinical or Practical (4)and SDL: Self directed learning (1)

Topics	No. of hours			
	L	T	C/P	SDL
Gametogenesis,mitotic & meiotic cell divisions in the germ line & abnormal division	**3**			
Reproductive cycles in female	**2**			
Fertilization	**1**			
Cleavage	**1**			
Implantation(why conceptus is not rejected by its mother?) Trophoblast & chorion	**2**			
Genomic imprinting	**2**			
Gastrulation	**2**			
Neurulation	**1**			
Folding	**1**			
Derivtives of the three germ layers	**1**			
Fetal membranes	**3**		**2**	
Congenital anomalies & teratology	**3**		**2**	**1**

II- Systemic Embryology

L: Lecture (45), C/P: Clinical or Practical (12) and SDL: Self directed learning (4)

Topics	No. of hours			
	L	**T**	**C/P**	**SDL**
Development of the Limbs	**2**		**2**	
Development of the cardiovascular system (CVS)	**6**		**2**	
Development of the respiratory system	**2**			
Development of the GIT	**5**		**2**	**2**
Development of the urinary system	**6**		**2**	**1**
Development of the genital system	**4**		**2**	
Development of the head & neck	**7**		**2**	**1**
Development of musculoskeletal system	**3**			
Development of the nervous system (CNS)	**3**			
Development of organs of special senses	**4**			
Development of integumentary system	**2**			

4 - Student Assessment Methods

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills.
4.4 Weighing of assessment
-written (1paper/150)
-oral 25
-practical 75
Total: 250 marks

5 -- List of References

5.1- Course Notes (paper and / or electronic)

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5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 39th edition, Elsevier, 2004

5.3- Recommended Books

- *T.W.Sadler* **, Langman's Medical Embryology**, 8th edition, Lippincott, Williams & Wilkins, 2000.
- *Schoenwolf,G.,Bleyl,S.,Brauer,P., and Francis-West,P.,Larsen's Human Embryology4th edition,Elsevier,2009*

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

8. 6 Course specifications for Radiological Anatomy

Program(s) on which the course is given: **Medical Doctorate** Degree in **Anatomy and Embrology**

Major or minor element of programs: **Radiological anatomy**

Department offering the program: **Department of Anatomy**

Department offering the course: **Department of Anatomy**

Academic year / Level: **Semester 6**

Date of specification approval ……..

A~ Basic Information

Title: Radiological anatomy **Code: AE 7004**
Credit Hours: 2 hrs **Lecture: 15**
Tutorial: **Practical: 30 Total:45**

Coordinator

B ~ Professional Information

1- Course Aims:

This course aims that postgraduate student would acquire sufficient knowledge and skills needed to identify anatomical structures in different radiological images. Emphasis is given particularly to normal variations and identification of the normal as compared to abnormal structure.

2- Intended Learning Outcomes (ILOs) from the Course:
a- Knowledge and understanding
By the end of the course the candidate will be able to:

a1.Recognise the basic techniques employed in diagnostic imaging
a 2 Identify the anatomical structures in a diagnostic image

a3. Identify the level and plane of the given radiological image,

a4. Identify the relative position of different organs in a radiological image

b- Intellectual skills

By the end of the course the candidate will be able to:

b1- identify normal variations of structures seen in diagnostic images.

b2 – Estimate normal from abnormal dimensions of structures in images.

b3 **-** Interpret diagnostic images and understand the clinically relevant condition.

c- Professional skills

By the end of the course the candidate will be able to:

c1- Identify major structure(s) in a radiological image

c2-Identify the different structures in TS and median sagittal sections of the body.

d- General and transferable skills

By the end of the course the candidate will be able to:

d1**.** ***Communicate*** scientific English and medical terminology (verbal and written) regarding radiological imaging.

d2. ***Research***: run a library search or an internet search, collect data and present a concise review about a chosen topic.

Topics	No. of hours			
	L	T	C/P	SDL
Head and Neck	3		6	
Abdomen and Pelvis	5		10	
Thorax	3		6	
Upper limb	2		4	
Lower Limb	2		4	

Lectures(10), practicals(20)

4 - Student Assessment Methods

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills. 4.4 Weighing of assessment
-written (1paper/60)
-oral 10
-practical 30
Total: 100 marks

5 -- List of References

5.1- Course Notes (paper and / or electronic)
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……
5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 39th edition, Elsevier, 2004

5.3- Recommended Books

- Wicke,L.(1994) Atlas of Radiological Anatomy,5th edition,Lea &Febiger,Tokyo..
- Moore, K.L. and A.F. Dalley, **Clinically Oriented Anatomy**, 5th edition, Lippincott, Williams & Wilkins, 2006.
-

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

8.9 - Elective Courses

Choose ONE of the following courses: Advanced Neuroanatomy or Advanced Embryology. This is included with the radiological anatomy in the 6th semester

8.9a Course specifications for Advanced Neuroanatomy:

Program(s) on which the course is given**:Medical Doctorate** Degree in **Anatomy and Embrology**

Major or minor element of programs: **Advanced Neuroanatomy.**

Department offering the program: **Department of Anatomy**

Department offering the course: **Department of Anatomy**

Academic year / Level: **Semester 6**

Date of specification approval ……..

A- Basic Information

Title: Neuroanatomy **Code: E 7001**
Credit Hours: 4hrs **Lecture: 52**
Tutorial: **Practical: 48** **Total: 78**

Coordinator

……

B - Professional Information

1- Course Aims:

This course aims that postgraduate student would acquire in depth knowledge in the human neuroanatomy. Emphasis is given particularly to points of clinical relevance and recent research in the field of neuroanatomy.
The course also aims that the postgraduate student should be able to design,plan,and execute original independent scientific research.A commitment to honesty and integrity in research ,scientific and collegial interactions are targeted.

2- Intended Learning Outcomes (ILOs) from the Course:

a- Knowledge and understanding

By the end of the course the candidate will be able to:

a1. Describe the detailed gross anatomy of the CNS and its blood supply.

a_2.Describe detailed anatomy of the peripheral nervous system and autonomic nervous system

a_3 . List neurotransmitters in different parts of the nervous system

a_4. Identify parts of CNS responsible for learning and memory

a_5.Recognize brain- behavior relationships

a_6.Recognise sexual differences in brain structure

a_7.Identify nervous system response to injury

a_8. Pair/ associate any vessel with its area of distribution in CNS.

a_9.identify functional MRI data of the brain

b- Intellectual skills

By the end of the course the candidate will be able to:

b1- Employ anatomical knowledge to solve clinical problems.

b2 - Localize the possible site of lesion in the nervous system from given clinical data denoting sensory or motor loss.

b3 **-** Interpret diagnostic images of brain and understand the clinically relevant condition.

c- Professional skills

By the end of the course the candidate will be able to:

c1- Identify major structure(s) of the human brain

c2- Identify the sexual differences in the human brain

c3-Recognize an injury in the nervous system utilizing imaging techniques

c4-Identify the different structures in TS and median sagittal section and MRI of the brain.

d- General and transferable skills

By the end of the course the candidate will be able to:

d1**.** ***Communicate*** scientific English and medical terminology (verbal and written) in a clear, understandable, logical, and concise manner.

d2. ***Research***: collect data and present a concise review about a chosen topic.

3- Course content:

Topics	No. of hours			
	L	T	C/P	SDL
Gross morphology of the spinal cord and its blood supply & lesions	3		2	
Tracts	3			2
Gross morphology of the brain stem and its blood supply	3		2	
Cranial nerve nuclei	2		2	1
Meninges ,Ventricles of brain and CSF	1		2	
Gross morphology of the cerebellum and its blood supply	3		2	
Gross morphology of the diencephalon and its parts	3		2	
Gross morphology of the cerebral hemispheres	4		2	
Gross morphology of the limbic system	2		1	1

White matter of the cerebral hemispheres	3		1	
Gross morphology of the basal ganglia and limbic system	2		1	
Brain- behavior relationships	1		2	
Sexual dimorphism of the brain	1			
Learning and memory	1			
Neurotransmitters in nervous system	2			
Blood supply of the brain	4		2	
Special sensory pathways (olfactory, visual auditory)	4		1	
MRI , functional MRI & CT of the normal brain	2		2	

L: Lecture (52), T: Tutorial, C/P: Clinical or Practical (24) and SDL: Self directed learning (4)

4 - Student Assessment Methods

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills.
4.4 Weighing of assessment
-written (1paper/120)
-oral 20
-practical 60
Total: 200 marks

5 -- List of References

5.1- Course Notes (paper and / or electronic)
……
……
5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 39th edition, Elsevier, 2004

5.3- Recommended Books

- Snell, R.S., **Clinical NeuroAnatomy**, 8th edition, Lippincott, Williams and Wilkins, 2008.

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/
- Medical education online: http://www.medicaleducationonline.org/

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8.9b Course specifications for advanced Embryology:

Program(s) on which the course is given **Medical Doctorate degree** in Anatomy and Embryology

Major or minor element of programs **Advanced Embryology**

Department offering the program**: Anatomy and Embryology**

Department offering the course : **Anatomy and Embryology**

Academic year / Level: 6^{th} semester

Date of specification approval ……..

A~ Basic Information

Title: Embryology **Code: E 7002**
Credit Hours: 4 hours **Lecture: 55**
Tutorial: **Practical: 15** **Total: 70**

Coordinator
……
B - Professional Information
1- Course Aims:

The course provides an outline of the events taking place during human development emphasing the mechanisms of malformation and etiology and pathogenesis of some common congenital abnormalities..
The course provides an overview on the development of the various body systems in the human, and lays the foundation for understanding the underlying mechanisms of congenital malformations.
The course aims to provide a view of prenatal as well as neonatal gross anatomy and the growth changes in the human.

2- Intended Learning Outcomes (ILOs) from the Course:

a). Knowledge and understanding
By the end of the general embryology course the candidate will be able to:

a 1 .Describe the sequence of events taking place during early prenatal development of the human embryo, including gametogenesis, fertilization, implantation, cleavage, gastrulation, neurulation and folding.

a 2 List/identify the derivatives of each embryonic germ layer (e.g., derivatives of mesoderm etc.), the results of fertilization, the contents of umbilical cord, the functions of amnion or placenta.

a 3 Pair a derivative with its undifferentiated embryonic germ layer – or a given day with the corresponding stage of the fertilized ovum.

a 4 Compare between spermatogenesis and oogenesis, uniovular and binovular twins, 1ry, 2ry and 3ry chorionic villi, the parts of deciduas, the types of placenta previa, the 1ry, 2ry and definitive yolk sac.

a 5Predict the result of union between any type of sperm (with normal or abnormal number of chromosomes) with an ovum (having a normal or abnormal number of chromosomes). **Predict** the possible congenital anomaly that may arise from a certain chromosomal defect or environmental agent including drugs.

a 6 **Identify** the features and morphology of the neonate and growth changes

By the end of the systemic embryology course the candidate will be able to:

a 6 Describe the mechanism of development of the various components of the body systems, including the cardiovascular, respiratory, digestive, urogenital, endocrine, musculoskeletal, nervous and integumentary systems, in addition to organs of special senses, the head and neck and coelomic cavities.

a 7 List/identify the derivatives of an embryonic structure (e.g., derivatives of sinus venosus, ventral mesogastrium, mesonephros, pharyngeal pouches ... etc.).

a 8 List/identify the embryonic source(s) of an organ (e.g., sources of the right atrium, the duodenum, the urinary bladder ... etc.).

a 9 Pair a derivative of an undifferentiated embryonic structure in the male with its counterpart in the female.

a 10Predict the possible congenital anomaly that may arise if a certain fault occurs during embryonic development.

b-Intellectual skills

By the end of the course the candidate will be able to:

b $_1$Solve problems by correlating between a given congenital abnormality and the faulty incidence during development.

b $_2$Predict the prenatal age from the number of existing somites.

Predict the state of the embryo in a given postovulation day.

c- Professional skills

By the end of the course the candidate will be able to

c $_1$ identify any common congenital anomaly of the fetal membranes, fused twins, genetic anomalies in a given diagram, photograph or museum jar.

d- General and transferable skills

By the end of the course the candidate will be able to:

d $_1$Communicate scientific English and medical terminology (verbal and written) in an understandable, logical, concise manner.

d $_2$Research: run a library search or an internet search, collect data and present a concise review about a chosen topic.

3- Course content:

I. General Embryology

L: Lecture (17), C/P: Clinical or Practical (3)and SDL: Self directed learning (1)

Topics	No. of hours			
	L	T	C/P	SDL
Gametogenesis& Reproductive cycles in female	**2**			
Link between development and cancer+note about gene names	**2**			
Fertilization, Cleavage& Implantation	**1**			
Why do we age?	**1**			
Timing of human development	**1**			
Trophoblast & chorion &hydatidiform moles	**2**			
Gastrulation & genomic imprinting	**1**			
Mechanisms of Neurulation & neural tube defects & neural crest cells	**1**			
Folding	**1**			
Derivtives of the three germ layers	**1**			
Fetal membranes	**1**		**1**	
Principles and mechanics of morphogenesis and dysmorphogenesis	**2**		**2**	**1**

II- Systemic Embryology

L: Lecture (38), C/P: Clinical or Practical (12) and SDL: Self directed learning (4)

Topics	No. of hours			
	L	**T**	**C/P**	**SDL**
Development of the Limbs	**1**		**2**	
Development of the cardiovascular system (CVS)	**5**		**2**	
Development of the respiratory system	**1**			
Development of the GIT	**4**		**2**	
Development of the urinary system	**5**		**2**	
Development of the genital system	**3**		**2**	
Development of the head & neck	**7**		**2**	**1**
Development of skin & musculoskeletal system	**2**			
Development of the nervous system (CNS)	**4**			
Development of organs of special senses	**4**			
Development of endocrine system	**2**			

4 - Student Assessment Methods

4.1 Written to assess knowledge.
4.2 Oral to assess knowledge, general and transferable skills.
4.3 Practical to assess professional skills.
4.4 Weighing of assessment
-written (1paper/120)
-oral 20
-practical 60
Total: 200marks

5 -- List of References

5.1- Course Notes (paper and / or electronic)

……

5.2- Essential Books (Text Books)

- Standring, S., **Gray's Anatomy**, 39th edition, Elsevier, 2004

5.3- Recommended Books

- *T.W.Sadler* **, Langman's Medical Embryology**, 8th edition, Lippincott, Williams & Wilkins, 2000.
- *Schoenwolf,G.,Bleyl,S.,Brauer,P., and Francis-West,P.,Larsen's Human Embryology4th edition,Elsevier,2009*

5.4- Periodicals, Web Sites, etc

- The official faculty's learning management system: http://mic2.shams.edu.eg/

5. Program courses

5.1 Level/ year of programme 1 semester 1

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE7001a	Gross anatomy1(upper & lower limbs, thorax)	3	48	56	9			

5.2 Level/ year of programme 1 semester 2

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE7001b	Gross anatomy2 (abdomen and pelvis)	2	37	36	15			

5.3 Level/ year of programme 2 semester 3

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE7001c	Gross anatomy3 (head & neck)	1	55	42	4			

5.4 Level/ year of programme …2 semester 4

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE 7002	neuroanatomy	1	52	48				

5.5 Level/ year of programme 3 semester 5

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE 7003	embryology	2	67	16				

5.6 Level/ year of programme 3 semester 6

a. compulsory

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
AE 7004	Radiological anatomy	1	15	30				

b. Elective (choose ONE) year of programme 3 semester 6

Code No.	Course title	No. of units	No. of hours/ week					Programme ILOs Covered (by No.)
			Lect.	Lab.	Exer.			
E7001	Advanced neuroanatomy	1	44	24	4			
E 7002	Advanced embrology	1	54	15	2			

V~ General Information

1 – Monitoring Of Training and Submission Of Training Reports

You must keep proper and updated records in your logbook to reflect the activities encountered in your training. Your logbook must be duly endorsed by an authorized signatory at the end of each semester.

You will be continuously assessed by your supervisors, in consultation with head of department. An assessment will be submitted within 2 weeks of completion of each semester.

2 ~ Miscellaneous Information:

Injury and/or Blood or Body Fluid Exposure:

During regular working hours, you should immediately report an exposure incident to toxicology department. If exposure occurs after regular working hours or during a weekend or holiday; please call your supervisor. For injury, please report to the Emergency Department.

Please also be sure to inform the supervisors of an exposure incident and/or injury.

3 ~ Action Completion Of Clinical Training

Once all training sessions are completed the log book should be signed by the senior supervisor and the head of the department and then should be submitted to post graduate Secretariat.

4~ Reference

The Training Guide is available at the post graduate Secretariat and could be downloaded from the following website

VI – Your log book

1- Introduction

The aim of this book is to give you a guide to the expectations for each item. It will be a guide for both you and your teachers to what you should be seeing and doing.

It will give you a list of the important topics that you should think about and should be covered in:

1. Clinical or practical sessions

or

2. Tutorials

or

3. Self-directed learning (SDL)

For each item there is also a list of

1. Clinical conditions or Practical sessions to be seen or attended (According to each degree)
2. Practical procedures to be seen and done

REMEMBER

This document is *only a guide*. It is not an exhaustive list. It is not just a checklist to score points. It is a guide to encourage you to read and learn more. *This book is for your benefit*. It will form a record of your clinical training and experience.

2 - Supervisors

……

……

3–Tables for Training Records

Candidates are required to fulfill 75% of the listed activities in order to be eligible for the exam entry. The minimum number required for each activity = 75%. You are free to attend more and record your extra attendance.

Weekly Department Plan

Day /time	**Saturday**	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**
dissection						
Conference						
teaching						
seminar attendance						

Monthly activity……active participant in seminar……..
Sixth monthly activity ……
Yearly activity

CONFERENCES ATTENDANCE

(NB. Minimum number required is one/year)

No	Date	Place	Topics	Supervisor signature

SEMINARS ATTENDANCE

(NB. Minimum number required is 1/month)

No	Date	Place	Topics	Supervisor signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

THESIS ATTENDANCE

(NB. Minimum number required is 10)

No	Date	Place	Name of the thesis	Supervisor signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

ACTIVITIES ATTENDED

(NB. Minimum number required is 6)

No	Date	Place	Name	Supervisor signature
1				
2				
3				
4				
5				
6				

CASE PRESENTATIONS

(NB. Minimum number required is 7)

No	Date	Place	Diagnosis	Supervisor signature
1				
2				
3				
4				
5				
6				
7				

DISSECTION PERFORMANCE

(NB. Minimum number required is 8)

No	Date	Place	Name of dissected part	Supervisor signature
1				
2				
3				
4				
5				
6				
7				
8				

1. Temporal and infratemporal fossa.
2. Pterygopalatine fossa.
3. Suboccipital triangle.
4. Prevertebral muscles.
5. Pharyngeal constrictors.
6. Laryngeal cartilage and muscles.
7. Excision and dissection of spinal cord.

8. Sacral canal.
9. Ventricular system of the brain.

Requirements

Candidates are required to fulfill 75% of the listed activities in order to be eligible for the exam entry. The minimum number required for each activity = 75%. You are free to attend more and record your extra attendance.

5 - Log book preview

The candidate logbook will be reviewed and patients seen/ skills performed summarized by diagnosis groups during the semester evaluation and at the end of the course in the table below. The results of this review will be totaled in the summary chart below.

For Doctorate degree

Summary

Semester	1st	2nd	3rd	4th	5th	6th	Total
Activity	No	No	No	No	No	No	
Conferences attendance							
Seminars attendance							
Thesis attendance							
Activities Attended							
Case presentations							
Dissection performance							
Supervisor signature							

VII - Head Of Department Approval For The Exam Entry

VIII – Thesis Follow up

التقرير النصف السنوى لعام / التاريخ/

عن الطالب /

المقيد لدرجة (ماجسيتر / الدكتوراة)

بقسم /

تقرير السادة الاساتذة المشرفين

جمع المادة العلمية و كتابة المقدمة	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من الجمع	☐
الجزء العملى	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من التحليل	☐
مناقشة النتائج	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من التحرير	☐
المراجعة النهائية مع المشرف	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهت تماما	☐

رأى السادة المشرفين	إستمرار قيد الطالب	☐	مد القيد	☐
	شطب قيد الطالب	☐		☐

تم تشكيل لجنة المناقشة نعم تاريخ التشكيل / /

لا

مد / شطب القيد

توقيع السادة المشرفين وكيل الكلية

VIII – Thesis Follow up

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الجزء العملى	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من التحليل	☐
مناقشة النتائج	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من التحرير	☐
المراجعة النهائية مع المشرف	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهت تماما	☐

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	شطب قيد الطالب	☐		☐

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الجزء العملى	بدأ	☐	قطع شوطا محدودا	☐
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المراجعة النهائية مع المشرف	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهت تماما	☐

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الجزء العملى	بدأ	☐	قطع شوطا محدودا	☐
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مناقشة النتائج	بدأ	☐	قطع شوطا محدودا	☐
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	أوشك على الإنتهاء	☐	إنتهت تماما	☐

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	أوشك على الإنتهاء	☐	إنتهى من التحليل	☐
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المراجعة النهائية مع المشرف	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهت تماما	☐

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	شطب قيد الطالب	☐		☐

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الجزء العملى	بدأ	☐	قطع شوطا محدودا	☐
	أوشك على الإنتهاء	☐	إنتهى من التحليل	☐
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تم تشكيل لجنة المناقشة نعم تاريخ التشكيل / /

لا

مد / شطب القيد

توقيع السادة المشرفين وكيل الكلية

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

_____
_____
_____

Agreed educational objectives and timescale in which objectives should be achieved.

_____
_____
_____

Comments by Candidate

_____
_____
_____

Comments by Supervisor

_____
_____
_____
_____

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

Agreed educational objectives and timescale in which objectives should be achieved.

Comments by Candidate

Comments by Supervisor

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

Agreed educational objectives and timescale in which objectives should be achieved.

Comments by Candidate

Comments by Supervisor

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

_____
_____
_____

Agreed educational objectives and timescale in which objectives should be achieved.

_____
_____
_____

Comments by Candidate

_____
_____
_____

Comments by Supervisor

_____
_____
_____
_____

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

_____
_____
_____

Agreed educational objectives and timescale in which objectives should be achieved.

_____
_____
_____

Comments by Candidate

_____
_____
_____

Comments by Supervisor

_____
_____
_____
_____

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

VIII – Evaluation Forms

To be completed at ----------
Candidate
Supervisor
Location

Aim of training

Agreed educational objectives and timescale in which objectives should be achieved.

Comments by Candidate

Comments by Supervisor

Date of next meeting

Signed by candidate

Signed by Supervisor

Date

Degree Program Evaluation Form by The Candidate
To be completed at the end of your degree.

Please consider each pair of statements and decide which most clearly reflects your view and **tick one box or answer the question**.

I. Individual Information
1. Are you a graduate of ASU?
yes no to some degree
2. Year and semester when studies began:

II. General Questions
1. What are the advantages/disadvantages of the general study environment at the University ASU?

2. What were your expectations when you applied to the degree?

3. Do you feel that the degree program prepares you well for your future studies or employment according to the demands and expectations of those institutions?
yes no to some degree

4. Has the time limit of the program (two or three academic years) caused you any difficulties or inconveniences?
yes no to some degree

III. Structure of Degree Program
1. Did you receive enough guidance in planning your study schedule in the beginning of the program?
yes no to some degree

2. What were the main difficulties in the planning of your study schedule?

3. What is your general opinion on the structure of the degree program?

4. In your opinion, does the degree program offer a good balance of lectures, seminars, conferences, and book exams?

○ yes ○ no ○ to some degree

a) General Studies

i) Do you feel that you have received enough guidance on academic writing?

○ yes ○ no ○ to some degree

ii) Do you feel that you have acquired sufficient knowledge on research skills (eg. quantitative and qualitative research methods)?

○ yes ○ no ○ to some degree

b) Courses

i) Have you had some special difficulties in completing some of the courses? Please specify.

ii) Has there been a sufficient variety of courses offered for your optional studies?

○ yes ○ no ○ to some degree

iii) Have you received enough guidance for the preparation of your thesis?

○ yes ○ no ○ to some degree

IV. Concluding Points

1. Did the degree program meet your expectations?

○ yes ○ no ○ to some degree

2. What aspects of the degree program do you particularly like?

3. What aspects of the degree program do you particularly dislike?

4. What are your suggestions on how to improve the program?

Thank you!